



A diploid surrounded by polyploids: tadpole description, natural history and cytogenetics of *Odontophrynus maisuma* Rosset from Uruguay (Anura: Cycloramphidae)

CLAUDIO BORTEIRO^{1,7}, FRANCISCO KOLENC^{1,2}, MARTÍN O. PEREYRA^{3,4},
SERGIO ROSSET⁵ & DIEGO BALDO^{3,6}

¹Museo Nacional de Historia Natural, 25 de Mayo 582, Montevideo, Uruguay. E-mail: borteiro@gmail.com

²Universidad Católica del Uruguay, Montevideo, Uruguay. E-mail: fkolenc@gmail.com

³Laboratorio de Genética Evolutiva y Molecular, Facultad de Ciencias Exactas Químicas y Naturales, Universidad Nacional de Misiones. Félix de Azara N° 1552. CP: 3300, Posadas, Misiones, Argentina

⁴División de Herpetología, Museo Argentino de Ciencias Naturales “Bernardino Rivadavia”-CONICET, Ángel Gallardo 470 (1405), Buenos Aires, Argentina. E-mail: mopereyra@gmail.com

⁵Sección Herpetología, Museo de La Plata, Universidad Nacional de La Plata, Paseo del Bosque s/n° (1900), La Plata, Buenos Aires, Argentina. E-mail: sergiorosset@gmail.com

⁶Instituto de Herpetología, Fundación Miguel Lillo-CONICET, Miguel Lillo 251, Tucumán, Argentina. E-mail: diegobaldo@gmail.com

⁷Corresponding author

Abstract

Odontophrynus maisuma is a recently described diploid species of the diploid-tetraploid *O. americanus* complex. It inhabits coastal regions of Uruguay and southern Brazil. Tadpoles of *O. maisuma* at stages 33–36 are about 47 mm of total length, and similarly to that of other *Odontophrynus* are typical pond dwelling anuran larvae; the oral disc is small and laterally emarginated, bearing a single row of marginal papillae interrupted by a large dorsal gap. The labial tooth row formula is 2(2)/3(1); sometimes A2 and P1 are not divided. The advertisement call consists of notes that last 570–785 ms, composed of 43–57 pulses, and with a dominant frequency between 1124–1211 Hz. The chromosome complement is composed by 11 banded chromosome pairs ($2n = 2x = 22$; $NF = 44$), with evident positive C-bands in the centromeric regions of all chromosome pairs, in the short arms of pairs 2 and 4, and in the long arms of pair 6 and 9. Nucleolar Organizer Regions (Ag-NORs) are located interstitially in the short arms of both chromosomes of pair 4. Preliminary data suggests that erythrocyte morphology could be used to discriminate between diploid and tetraploid tadpoles of *Odontophrynus*.

Key words: *Odontophrynus*, tadpole, advertisement call, Ag-NORs, C-banding, erythrocyte measurements

Introduction

The Neotropical frogs of the genus *Odontophrynus* (Anura: Cycloramphidae) are medium sized, toad-like anurans that are widely distributed in central-eastern South America (Savage & Cei 1965). Ten species are currently recognized (Frost 2010), which present burrowing habits remaining most of the year at shelter underground, and breed seasonally after heavy rains usually in small temporary ponds or streamlets. Although being common and widespread, reports on the natural history of these interesting frogs are limited to a few works (i.e. Barrio 1964; Cei 1980).

Odontophrynus americanus is by far the most studied species in the genus, as was the first bisexual vertebrate in which naturally occurring tetraploidy was observed (Beçak *et al.* 1966). Several cytogenetic studies on this species published during the last decades have lead to the current opinion that it is a complex mosaic of populations of cryptic diploid and tetraploid species (see Rosset *et al.* 2006). The basic